GPs' and pharmacists' experiences of managing multimorbidity: a 'Pandora's box'

Susan M Smith, Siobhan O'Kelly, Tom O'Dowd

ABSTRACT

Background
Multimorbidity is defined as the occurrence of two or more chronic diseases in one individual. Patients with multimorbidity generally have poorer health and functioning and higher rates of attendance in primary care and specialty settings.

Aim
To explore the views and attitudes of GPs and pharmacists managing patients with multimorbidity in primary care.

Design of study
Qualitative study using focus groups.

Setting
Primary care in Ireland.

Method
Three focus groups were held in total, involving 13 GPs and seven pharmacists. Focus groups were recorded, transcribed, and analysed using the 'framework' approach.

Results
The predominant themes to emerge from the focus groups were: 1) the concept of multimorbidity and the link to polypharmacy and ageing; 2) health systems issues relating to lack to time, inter-professional communication difficulties, and fragmentation of care; 3) individual issues from clinicians relating to professional roles, clinical uncertainty, and avoidance; 4) patient issues; and 5) potential management solutions.

Conclusion
This study provides information on the significant impact of multimorbidity from a professional perspective. It highlights potential elements of an intervention that could be designed and tested to achieve improvements in the management of multimorbidity, outcomes for individuals affected, and the experiences of those providing healthcare.

Keywords
chronic disease; general practice; multimorbidity; qualitative research.

INTRODUCTION

Advances in preventive and curative medicine, and an increasing life expectancy in the developed world have contributed to increasing multimorbidity. This is defined as the coexistence of two or more chronic illnesses in an individual.[1,2] While increases in chronic disease prevalence have become 'the norm' in primary care, the concept of regarding it as multimorbidity is relatively recent. There is still ongoing debate about its definition and identification.[2,3]

Research on multimorbidity, particularly in relation to potentially effective management strategies, is still relatively limited.[4,5] Previous studies have shown an inverse relationship between increasing multimorbidity and health-related quality of life, with physical health shown to have deteriorated more than mental health.[6–8] There is some evidence to suggest that a self-management plan for chronic disease can improve health-related quality of life and reduce hospitalisation.[9]

Qualitative work has established that the main issues affecting patients with multimorbidity include loss of function, multiple medicine use, and negative effects on wellbeing, relationships, and coordination of care.[10,11] In addition, patients with multimorbidity often

***SM Smith**, MSc, MD, MRCGP, senior lecturer in primary care; **T O'Dowd**, MD, FRCGP, professor of general practice; **S O'Kelly**, MSc, MICGP, research fellow, Department of Public Health and Primary Care, Trinity College Centre for Health Sciences, AMNCH, Tallaght Hospital, Dublin, Ireland.*

Address for correspondence
Dr Susan Smith, Trinity College Dublin, Department of Public Health and Primary Care, Trinity College Centre for Health Sciences, AMNCH, Tallaght Hospital, Dublin, 24, Ireland. E-mail: susmith@tcd.ie

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know a lot about managing their conditions and are actively engaged in self-management. However, they also have an interest in, and require support from, an enabling multidisciplinary health professional team.

While the views of patients with multimorbidity have been documented, there is no study — to the authors' knowledge — exploring the views of health professionals caring for such patients, even though these patients form a large part of their workload.[12] There is also a need to understand both doctors' and patients' expectations of consultations.[13] This is particularly important for more complex consultations, as often arises with multimorbidity.

This study aims to document the views and beliefs of professionals working with patients to manage multimorbidity in primary care, specifically those of GPs and pharmacists who are particularly involved in such care. A descriptive qualitative approach was taken to describe the phenomenon of multimorbidity from the clinician's perspective.[14] It is hoped that this research will add knowledge that is much needed in this area, and that it will identify other research gaps. This will build an evidence base to inform the development of interventions to improve outcomes for those with multimorbidity.

How this fits in

There has been no previous qualitative research examining the experiences of GPs and pharmacists who manage patients with multimorbidity. Participants in this study linked multimorbidity to polypharmacy and ageing. They reported challenges in managing these patients in relation to lack of time, communication difficulties with other healthcare providers, and fragmentation of care. They also reported difficulties relating to clinical uncertainty and professional isolation. Participants identified potential management solutions that could be used to guide the development of an intervention to improve outcomes for individuals with multimorbidity.

METHOD

GPs and pharmacists were invited to attend focus groups to describe their experience as clinicians managing people with multimorbidity. To gain as wide a range of views as possible, a list of GPs who acted as tutors for undergraduate medical students at Trinity College Dublin was complied and a sample of GPs were selected from this list based on practice location (urban/rural; deprived/affluent), years of experience, and sex.

Forty-nine GPs were invited to participate and 13 attended two separate focus groups of seven and six participants. These lasted for 90 minutes and were held at the Trinity College Health Sciences Centre in December 2007 and January 2008. The 13 attendees included a mix of practitioners as outlined above.

Pharmacists were identified from a database of pharmacists who attend a chronic disease management resource group run by the Irish Pharmaceutical Union. Fourteen were invited to attend a focus group and seven attended.

Data were collected through focus groups to elicit a broad range of information on this topic.[15] Researchers decided that discussion between peers would be more informative than individual representation in semi-structured interviews. Focus groups were run by two experienced qualitative researchers, one of whom facilitated the discussion while the other observed group dynamics and took notes. Facilitators were health researchers not known to the group participants. This approach was taken to encourage group members to speak freely, as the authors would have been known to them professionally through the teaching network of the Department of Public Health and Primary Care, Trinity College Centre for Health Sciences in which the researchers are based.

As multimorbidity is an emerging theme in clinical and research settings, each participant was sent a copy of a published editorial on multimorbidity as introductory material for the meeting.[2] A focus group topic guide was constructed by the authors and used by the facilitators during the focus groups (Box 1). The topic guide was constructed to ensure that the aims of the study would be met and to avoid the discussion focusing on definitions of multimorbidity alone. Participants were given €300 to cover their travel and locum costs.

Focus group discussions were taped and fully transcribed. Data analysis was based on the 'framework' method, in which the analyst creates meaning and connections between different themes identified in the data collection.[15]

The three authors familiarised themselves with the original, complete transcript for each focus group independently of each other. Each identified key issues and concepts, and categorised them for each focus group. The authors then compared and discussed emerging themes. Data were indexed into grouped themes and subthemes and representative

Box 1. Focus group topic guide.

- What do you understand by the term multimorbidity?
- Do you think it is a big issue?
- How does it affect you in everyday practice?
- What is the role of a GP/pharmacist in managing these patients?
- What would help you to manage these patients?
- How would you measure an improvement in outcomes in people with multimorbidity?

quotes were coded; the authors then agreed on the themes arising from the data.

The first draft of the results was fed back to the focus group facilitators for additional comments and clarification. Focus group facilitators also provided descriptive data based on their direct observation of participants during the groups.

RESULTS

The predominant themes to emerge from the focus groups were: 1) the concept of multimorbidity and the link to polypharmacy and ageing; 2) health systems issues relating to lack to time, inter-professional communication difficulties, and fragmentation of care; 3) individual issues from clinicians relating to professional roles, clinical uncertainty, and avoidance; 4) patient issues; and 5) potential management solutions.

Multimorbidity and the link to polypharmacy and ageing

GPs and pharmacists regarded multimorbidity as a common phenomenon and associated it with polypharmacy:

> *'...* [a person with multimorbidity is] *not someone from outer space.'* (GP1)

> *'... there are a lot of people with a lot of chronic illnesses out in our practice ... we have an absolute bucket load of people on more than five medications.'* (GP1)

However, while they recognise that it is common in practice, it is not a concept that has received attention:

> *'... it's been there all the time, you've just focused in on it.'* (GP4)

> *'For me, I've been a bit more aware to start with anyway.'* (Ph3)

There was discussion about the difference between multiple chronic conditions and multiple risk factors. Some GPs felt that, although a diagnosis such as hyperlipidaemia or hypertension may be coded as a chronic disease, they were different from diseases that present symptomatically:

> *'... morbidity to me signifies some debility and disability as well.'* (GP10)

They linked this lack of distinction between multiple conditions and multiple risk factors to the growth in preventive care. Participants stated that clinical guidelines, which are based around single conditions, encourage polypharmacy, with potentially harmful effects on patients:

> *'... so you have a guy with ischaemic heart disease who automatically has to go on five agents and then he's got diabetes, he's got another three agents and if you were to take each of the conditions, not necessarily diseases, maybe just lipidaemia or whatever, and put them on the best management protocol for that particular condition, you know, they're straight away on 20 different agents, and if you stop any of those then you're not following the guidelines for each of those.'* (GP6)

> *'... we're poisoning our patients.'* (GP10)

> *'On top of which even if they have one as opposed to multimorbidities, nowadays they're actually being covered for three or four other conditions to try and prevent them happening.'* (GP13)

Some GPs expressed concern about the number of treatments being administered and suggested that polypharmacy may add to multimorbidity:

> *'... if we adhere quite as tightly is that person going to live to 88 or 89, you know? What are we trying to achieve with people? Are we trying to make them all live until they're a hundred and have nursing homes packed with people who ... sitting in nappies all day or are we going to improve their quality of life for the people who are alive now?'* (GP7)

> *' ... probably half the morbidity is caused by the multiple medications they are on.'* (GP3)

In general, GPs and pharmacists tended to associate multimorbidity with older patients, who were described by one participant as a 'population collecting diseases' (GP4):

> *'...* [multimorbidity] *is on the increase definitely ... because, obviously, the patients are getting older ... living longer.'* (Ph3)

They felt there was a difference between younger and older patients with multimorbidity, with care being much more fragmented for younger patients:

> *'... but actually when they* [are] *old enough to be seen in the geriatricians then it is much better they are looking at the whole thing again.'* (GP12)

Health system issues

There were repeated references to the lack of time to manage patients adequately and the increased workload associated with multimorbidity:

'... how on earth can you really, in a busy practice, deal with someone with multimorbidity, multi ... polypharmacy in a 10-minute consultation? And to be fair to patients you can't, so you spend longer and therefore your day is longer, and you know, that's the nature of the job, but it does contribute to an increased workload.' (GP5)

'Yeah, it's one of those prescriptions that you need to block off just 45 minutes or something to have the time to just go through the possible [options]*.'* (Ph6)

Poor inter-professional communication was a predominant theme raised by participants. This problem was identified in communication between specialty and primary care, and also between pharmacists and GPs and hospitals. Pharmacists felt particularly isolated. Communication problems for them were further compounded by lack of interaction between pharmacists, and the possibility that patients could be getting medications from multiple pharmacists.

GPs reported difficulties with communication and having to interact with multiple different specialists for one patient, causing 'pure chaos' and a fragmentation of care:

'... [they are a] *group of people just going around clinics.'* (GP4)

'... lines of communication need time and nobody appears to have time.' (GP4)

They also felt that specialists added to the problem of polypharmacy:

'... the geriatricians are piling the tablets on, so I mean that whole thing seems to have changed.' (GP9)

The lack of communication led to what one GP described as:

'[A] *collusion of anonymity, which is, you know, this is not my patient, not my patient ... '* (GP10)

'They end up going everywhere and nobody would actually be responsible for anything, you know, everyone would just deal with that little bit that they have.' (GP1)

Pharmacists also described the care of these patients as fragmented:

'When people have three, four, five different illnesses and particularly where the care is kind of fragmented, under the care of a number of doctors, they're often not sure what exactly is wrong with them, or what illnesses or diagnoses they have.' (Ph5)

Individual issues for clinicians

GPs described their own role in managing patients with multimorbidity using concepts that recurred repeatedly: coordination, organisation, gatekeeper, reviewing medication, interpretation for patients and relatives, and liaison:

'You're almost the referee.' (GP6)

'It's tidying up the shop we need to be doing.' (GP4)

They also recognised that many of the complex problems were difficult to manage. They reported that they lacked confidence or clinical competence, and needed more training and support. This linked to the related theme of clinical uncertainty:

'I think I need more training about where these comorbidities or multimorbidities meet.' (GP9)

'We need options of things we can do with them if and when they run into problems.' (GP3)

'But now we've got a guy with both [conditions] *and, you know, what does that mean? And all that stuff in-between I don't feel comfortable about.'* (GP9)

'I think the point that I'm making is there's some key interactions that maybe we should be more clued in on.' (Ph4)

In relation to the roles of other primary care professionals, GPs felt that the role of the practice nurse in multimorbidity was unclear. They acknowledged that practice nurses had been very successful in running programmes of care for single conditions, but felt that many of the clinical issues in managing multimorbidity were too complex in terms of clinical decision making:

'... decision making very difficult to achieve.' (GP10)

'... that's what we spend years doing, is training to make clinical decisions, you know, so you can't expect nurses to do that, except in a limited way.' (GP12)

Participants reported making decisions in isolation from other practitioners. These decisions were linked to the theme of avoidance of complex issues which, if focused on, can appear to become increasingly problematic and unsolvable:

'I've got a lady who I've taken off loads of stuff without telling anybody and she's still tipping along quite nicely.' (GP4)

'So in some cases it can actually be so mad, the amount of things they're on, that you just kind of have to go with it and say, look I assume they're okay.' (Ph4)

GPs regarded pharmacists as having 'an important role to play', particularly in monitoring drug interactions, but they were uncertain as to the role of pharmacists in decision making for these patients:

'I am not sure that the pharmacist per se is going to be able to make those decisions. I mean they are probably more clinical decisions.' (GP13)

Pharmacists themselves described a desire to be more involved in patient education but felt overwhelmed by workload. They also felt that routines become established that can be hard to break without more time:

'I suppose that like if you did have this 12-item prescription, you know, like any prescription you put it through, and then after a couple of months you just take it for granted, you just dispense it away.' (Ph1)

'So there is I think a big information deficit for pharmacists and that limits us in making interventions.' (Ph5)

Pharmacists saw their role mainly in terms of surveillance of medicines and described their current involvement in managing medicines as occurring 'out of the goodness of our hearts' (Ph2), as they have no structure or contractual obligation to provide such services.

Pharmacists expressed some negative views about GPs and seemed to believe that GPs generally did not regularly review medications. They also believed that GPs could be more 'proactive at taking up opportunities' (Ph 5) to reduce or eliminate some medications:

'... some GPs could do with, I think, improving what they do.' (Ph4)

Pharmacists seemed to think that decision making was all made at specialist level and that solutions to problems lay at this level. They suggested interventions such as hospital pharmacists being added to specialist teams to improve decision making and prescribing:

'... it's just your question was how can pharmacists maybe make a difference. The ideal place would be to have the hospital pharmacists on a team like that to make a difference. In the absence of that, how can community pharmacists make a difference? That's a lot more work I think.' (Ph4)

Attitudes to specialist colleagues varied. There was some frustration, mainly because of communication difficulties. There were also positive descriptions of the 'function-oriented' approaches taken by practitioners to treat older people:

GPs expressed a need for specialist support in managing patients with multimorbidity. However, they were frustrated in their attempts to get this support and reported looking for it on 'a grace and favour basis' and that you 'have to be really worried to be able to do that.' (GP9)

Some felt suspicious that specialist colleagues were attempting to shift work from secondary to primary care:

'They're pushing, the hospitals are very much trying to push this stuff back on us.' (GP9)

However, inconsistencies in attitudes to specialists were apparent, with other GPs believing that specialists were trying to keep their outpatients busy by hanging on to patients:

'... justify their existence, don't they? Because they're afraid they'll lose funding, their OPDs [outpatient departments]*.'* (GP11)

These inconsistencies also related to GPs wanting power to manage patients — 'like geriatricians' — but then expressing difficulties in taking decisions such as stopping medications. GPs were also frustrated by interacting with junior hospital doctors, who change regularly. There was the perception that the doctors in training did not have the confidence or

expertise to manage patients with multimorbidity. Despite these mixed views on specialists, GPs wanted more of them and improved access to their expertise. The inconsistencies in attitudes to specialists seemed to reflect the difficulties and uncertainties GPs felt in managing patients with multimorbidity.

GPs and pharmacists expressed a sense of clinical uncertainty or feeling ill-equipped regarding managing patients with multimorbidity:

'... when do you take a 90-year-old off warfarin because she's had atrial fibrillation for the last 30 years?' (GP4)

'I suppose sometimes it can be a bit of guesswork, that you could dispense a prescription with 12 items on it, but you'd never actually, you don't have a diagnosis at your hand.' (Ph1)

There was a sense of being uncomfortable with some of the medications being prescribed but not having the confidence to make decisions to stop them:

'... but if you stop something and something happens, you know, it gets very dodgy.' (GP1)

Pharmacists expressed similar levels of clinical uncertainty, which overlapped with their perception of themselves as being professionally isolated and the interlinked theme of poor inter-professional communication:

'But our job is often frustrated in that, and sometimes, particularly people with multimorbidity, trying to help them or intervene in any kind of way is like doing a jigsaw in the dark with oven gloves on.' (Ph5)

However, GPs did report a potential way of dealing with this clinical uncertainty and managing these patients, which was also recognised as central to being a GP:

'Hmm, a bit like eating an elephant, you do it a bite at a time. And in general practice the beauty of it is these people do come back. I think the only thing you can do is chip away at the iceberg.' (GP5)

Lack of time leads to GPs and pharmacists feeling overwhelmed, and they reported a sense of inadequately managing patients with multimorbidity. The theme of avoiding multimorbidity emerged and was described as a 'Pandora's box':

'To be honest, you often get that sense [of opening Pandora's box]*, and you don't say anything, because you know you're at the beginning of the afternoon or whatever.'* (GP12)

'Yeah, Pandora's box, and once you actually start at it it's very hard to know where to actually stop and to do it properly.' (GP6)

This sense of avoidance also related to feeling that one did not really know what was happening for these patients because of the poor information and communication between care providers:

'... but when people have three, four, five different illnesses, and particularly where the care is kind of fragmented, under the care of a number of doctors, they're often not sure what is exactly wrong with them, or what illness of diagnoses they have.' (Ph5)

The themes of lack of time and avoidance are interlinked. One GP described his reaction to seeing someone whose main problem was obesity and associated joint problems, but who presented with a minor complaint that the GP then focuses on:

'When you see the obese person limping in with a sore throat [you ask]*: "Do you have a sore throat?",* [and ignore the limp]*.'* (GP8)

Focussing on such minor conditions avoids the more serious and time-consuming challenges of managing multimorbidity.

Patient issues

The burden of multimorbidity on patients and carers was recognised. GPs discussed how the system compounds the sick role for patients with multimorbidity:

'Their care takes all week, "really affects their wellbeing".' (GP13)

'Yeah, and invariably they end up in the grounds of psychiatrists at some stage because they become depressed.' (GP7)

Some GPs commented on the potential presence of cognitive impairment for these patients as a result of their multiple conditions and treatments:

'The other problem with a percentage of these patients is that they are, you know, cognitively impaired and it's very difficult to explain things to them and you have to explain things again and

again, and in fact they still get muddled up with their tablets and all the rest of it.' (GP9)

'And I actually think that's why these people take so long at consultations, because they're also automatically disorganised in their brains and in their presentation and so on. It can take 20 minutes to find out why they've actually come in to you.' (GP13)

The GPs recognised that many of their patients with multimorbidity faced loneliness and depression, and that there is a huge burden placed on carers:

'... some of these people [carers] *are not getting the period of life, which is their own.'* (GP4)

One pharmacist was more positive about patients, which reflected the GPs' concerns that many patients with multimorbidity were managing well and did not need an intervention:

'I think the patients have a lot to offer as well. I mean you get certain patients who are very, very, very keen to know what amounts of medication they are taking, they're very much on top of their condition.' (Ph3)

Potential management solutions

GPs and pharmacists were encouraged to consider potential ways of improving management for patients with multimorbidity. The main solution offered was having more time to spend with patients:

'... if we had time to have longer consultations with them they would consult us less.' (GP12)

GPs commented on models of care delivery that they regarded as taking a generalist approach. These were ones that emphasised patient wellbeing and function, such as palliative care and medicine for older people:

'I'm a huge fan of geriatricians because I think they are very good about taking that global, overall view of people and deciding which are the priorities and working through them.' (GP6)

The importance of planning care rather than reacting to acute crises was emphasised. Also, participants stated that there needed to be structure to the care being offered: a 'proactive programme of review' (GP10). This could be a system within the practice with one GP taking responsibility for coordinating care for patients with multimorbidity or having the ability to refer patients outside the practice to a time-limited rehabilitation-type programme:

'We need a multimorbidity rehab scheme where we can send all these people, I'm not joking, like post-MI [myocardial infarction]*.'* (GP12)

However, GPs felt the idea of inter-practice referral to other GPs with a special interest in multimorbidity would not work. This was not only because of time pressures, but also because of the need for someone to take on the role of actively managing these patients within their own practices:

'We're all too busy.' (GP9)

'There has to be one person where the buck stops.' (GP6)

They did not want to disengage from managing patients with multimorbidity. The key was protected time and a clear line of responsibility:

'But it's actually quite enjoyable when you do [manage these patients]*, the point when you do so is proactive where I invite you in to discuss something, you've got a receptive audience.'* (GP7)

'But that initial assessment, you know, the ideal thing if you could set aside a 40, 45 minute slot for each of your multimorbidity patients, and just you know, do a clinic.' (GP6)

'One could decide to, say for good practice to actually, to ask a patient to nominate a GP for their chronic conditions, which ideally should be seen on a planned basis.' (GP11)

The system would require support; for example, specialist telephone support or the support of a health service-employed community pharmacist:

'To assess and judge all of the prescribing that's going on.' (GP10)

'Would be useful if we could phone a geriatrician, some sort of resource like that when we are feeling out of our depth.' (GP9)

Pharmacists focused on solutions relating to improving information sharing across sectors and discussed the potential value of centralised patient records. They also wanted to be incorporated into the existing communication systems; for example, receiving copies of patient discharge letters:

'... because it's all about information, you know, the key is having accurate information going down through the chain, accurate and clear.' (Ph4)

Both groups had further suggestions, such as the use of blister packs for tablets for people with polypharmacy and the use of smart cards to communicate patient information between sectors. They also identified a need to be able to re-access specialist care quickly for patients discharged from outpatient clinics:

'If you could re-access the services easily it would make so much more sense and free everybody up and like that, give them that message that you're well enough, you don't have to attend hospital any longer, which I think would be a very positive message.' (GP8)

However, within the discussion on potential solutions and interventions, GPs emphasised the need to maintain a balance between length and quality of life. They highlighted that people who are coping well should not be undermined, because not everyone with multimorbidity needs an intervention:

'We've all seen it, you get fellows who, or women, who have many, many medical problems and they rarely come to you, they just get on with life.' (GP7)

While the focus group facilitators encouraged the groups to consider outcomes measurement in multimorbidity, there was minimal discussion of this as a theme beyond the general recognition that a focus on function and quality of life was preferable to considering specific disease outcome measures.

DISCUSSION

Summary of main findings

This qualitative exploration of GPs' and pharmacists' attitudes to managing patients with multimorbidity has identified themes relating to: the concept of multimorbidity and its link to polypharmacy and ageing; health systems issues relating to lack to time, inter-professional communication difficulties, and fragmentation of care; individual issues for clinicians relating to professional roles, clinical uncertainty, and avoidance; patient issues; and potential management solutions.

Potential management solutions proposed by GPs related to the need for structured care, longer consultations, specialist support, and specific training on the issues involved. Pharmacists also identified increased time with structured medication reviews but, in addition, wanted to gain access to better patient information in order to improve their care delivery.

Strengths and limitations of the study

To the authors' knowledge, this is the first qualitative exploration of practitioner views on the emerging theme of multimorbidity. The use of focus groups, as opposed to individual interviews, was a strength of the study, as data analysis and the group facilitators' report confirmed that ideas were developed by participants who bounced ideas off each other.

An additional strength was the inclusion of more than one professional grouping within primary care (GPs and pharmacists) and the inclusion of focus group participants with a range of different clinical experiences and exposures. However, that additional professional groups, such as nurses, physiotherapists, and occupational therapists, were not included could be seen as a weakness. This study only included GPs and pharmacists as the previous research had indicated that patients with multimorbidity did not see practice nurses as frequently as might be expected.[16] This probably reflects the complexity of their care requirements and their need for repeat prescriptions. Further potential limitations of the study are the relatively small number of focus groups held. The number was limited by time and resource constraints, as it can be difficult to gather busy professionals, or any group of research participants, together in focus groups.

The study was based in one healthcare system, which may limit international transferability. However, no theme arose relating to access to primary care services themselves, which tends to be one of the more variable aspects of different healthcare systems. Individuals with multimorbidity are being managed in primary care and community settings in most countries. Thus many of the themes are likely to be transferable, although modes of delivering interventions will vary between settings. The themes that arose may have been influenced by the prior distribution of an article on multimorbidity to participants to give them background knowledge about multimorbidity.[2] However, the authors carefully considered whether this literature should be provided and felt, based on previous experience of running workshops on multimorbidity,[17] that prior consideration would lead to more valuable discussion. Previous discussion had tended to focus predominantly on definitions of multimorbidity, but the study also aimed to explore clinicians' experience and views on management options.

Comparison with existing literature

Polypharmacy, which is defined as multiple drug use,[18] was a dominant theme and was viewed simply

in terms of numbers of medications taken. There is a move in the international literature beyond this, towards an appreciation of appropriate and inappropriate polypharmacy.[19] This concept was not discussed by the GPs beyond the recognition that polypharmacy frequently resulted from the appropriate prescribing of risk-reducing medications as indicated by single-disease guidelines. This reflects the prescribing difficulties and the paradox faced by conscientious GPs in attempting to balance the potentially competing demands of health promotion, evidence-based medicine, and the use of multiple medications.[20,21] Tools are being developed to try and distinguish between appropriate and inappropriate polypharmacy,[22,23] but these tools are not yet a feature of routine clinical practice.

There was a sense that the practitioners felt overwhelmed at times when trying to manage these patients, and this may reflect patients' reports that they turn to their GP when all else fails. There may be an unrealistic expectation that symptoms can be managed by GPs at this point. GPs described a strategy of treating simpler and more manageable (acute) conditions in preference to 'opening the Pandora's box' of multimorbidity. The concept of containment or holding has arisen in the literature on frequent consulters and 'heartsink' patients.[24] Consideration of current management strategies will enable more appropriate training of GPs, for example along the lines of 'biting off one piece of the elephant at a time' as suggested by one of the GPs.

Both GPs and pharmacists regarded having more time to spend with patients as the key solution. However, they proposed a broad range of additional ideas reflecting the likelihood that there is no simple solution to improving the management of these patients. This ties in with the emerging literature on complexity in primary care and the acknowledgement that GPs' role in a generalist setting involves difficult decision making.[25] Therefore, complex, multifaceted interventions to support practitioners managing patients with multimorbidity are likely to be most appropriate. This study suggests various potential elements of such a complex intervention, such as providing longer consultations. This is also a model being tested for complex health conditions including multimorbidity in Glasgow.[26]

Other potential intervention components included: identifying a single GP to coordinate management; improving information exchange systems; providing appropriate training and clinical support; and enhancing the role of other members of the primary care team such as pharmacists. Interestingly, increased involvement of pharmacists was proposed by both groups, though in different ways. GPs proposed the idea of a community pharmacist to provide advice on medicines management. However, they highlighted that this person should be an independent resource working outside the current business environment of community pharmacy. Pharmacists proposed the addition of a pharmacist to the specialist teams, who they regard as being the clinicians managing these patients. In this model, the specialty care-based pharmacist would improve the link to the community pharmacy and improve medicines management when patients are discharged from hospital. Interestingly, neither group suggested the model of nurse-led case management, which features prominently in the literature on chronic disease management.[27]

The themes emerging from the study were understandably different from those identified in the study on patient perspectives of multimorbidity.[28] The most notable difference was the strong concept, expressed by patients, of the GP being the last port of call after all self-management strategies had failed, and this theme was absent from the practitioner perspective.

There was a clear recognition from both GPs and pharmacists that some patients with multimorbidity were doing fine and that it is important not to medicalise them further. These patients are likely to be the 'Less Frequent Consulter' group identified by Townsend *et al*. These patients have multimorbidity, but consult GPs less often and have more stable conditions, containable symptoms, and employ more effective self-management strategies.[28] Those planning and designing interventions for multimorbidity need to recognise this group of patients, as they may not need any intervention. In addition, they need to consider incorporating self-management training for the other group described by Townsend *et al*. These patients consult more frequently, have more unstable conditions, have disruptive symptoms, and are less likely to employ self-management strategies.

This study provides more information on the significant impact of multimorbidity and provides information that could be used to design and evaluate an intervention to improve care delivery and, more importantly, to improve outcomes for individuals affected.

Competing interests
The authors have stated that there are none.

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